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**FE6163 (US)**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of: )  
)  
**John Richard Severn et al.** )  
)  
Serial No.: **10/589590** ) Examiner: **Unknown**  
)  
Filed: **August 16, 2006** ) Art Unit: **Unknown**  
)  
For: **TITANOCENEN-BASED CATALYST** )  
**SYSTEM** )

February 7, 2007

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

This Information Disclosure Statement is being filed before the first Office action on the merits.

It is requested that the enclosed documents listed on the attached Information Disclosure Citation form PTO-1449 be considered by the Patent Examiner in connection with the above-identified application and be made of record therein. A copy of the International Search Report for this application is enclosed.

Independent consideration and acknowledgement of the enclosed documents are respectfully requested.

No payment is believed to be due; however, the Commissioner is hereby authorized to charge USPTO deposit account 08-2336 any payment due and to credit any overpayment thereto.

Respectfully submitted,

**John Richard Severn et al.**

By: \_\_\_\_\_

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Enclosures

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I hereby certify that this correspondence is being deposited with sufficient postage thereon with the United States Postal Service as first class mail on February\_\_\_\_\_, 2007, in an envelope addressed to:


Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Jo Ann Brownlee  
2/7/07

Date of Signature

 <b>FORM PTO-1449</b> <b>INFORMATION DISCLOSURE CITATION</b>				Atty Docket <b>FE 6163 (US)</b>		Serial No. <b>10/589,590</b>	
				Applicant <b>John Richard Severn et al.</b>			
				Filing Date <b>August 16, 2006</b>		Group Art Unit <b>Not Yet Assigned</b>	
<b>U.S. PATENT DOCUMENTS</b>							
Examiner Initial		Document Number	Issue Date	Name	Class	Sub-Class	Filing Date
	AA	4,399,054	08/16/83	Ferraris et al.			
	AB	5,145,819	09/08/92	Winter et al.			
	AC	5,239,022	08/24/93	Winter et al.			
	AD	5,243,001	09/07/93	Winter et al.			
	AE	5,324,800	06/28/94	Welborn, Jr. et al			
	AF	5,556,928	09/17/96	Devore et al.			
	AG	5,698,487	12/16/97	Sacchetti et al			
	AH	6,500,975	12/31/02	Schwab et al.			
<b>FOREIGN PATENT DOCUMENTS</b>							
		Document Number	Date	Country	Class	Sub-Class	Trans-lation
	AI	129,368	12/27/85	EP			
	AJ	395,083	10/31/90	EP			
	AK	416,815	03/13/91	EP			
	AL	420,436	04/03/91	EP			
	AM	485,820 (counterpart US 5,239,022)	05/20/92	EP			
<b>OTHER</b> (Including Author, Title, Date, Pertinent Pages, etc.)							
	AN		F.R.W.P. Wild et al., <i>ansa</i> -Metallocene Derivatives-IV.*Synthesis and Molecular Structures of Chiral <i>ansa</i> -Titanocene Derivatives with Bridged Tetrahydroindenl Ligands, <u>Journal of Organometallic Chemistry</u> , Vol. 232, p. 233-247 (1982)				
	AO		A. Cardoso et al., "Reactions of Trimethylsilylcyclopentadiene Derivatives with Titanium, Niobium, and Tantalum Halides," <u>J. Chem. Soc., Dalton Trans.</u> , Vol. 7, p. 1156-1160 (1980)				
	AP		D. W. Stephan et al., "An Approach to Catalyst Design: Cyclopentadienyl-Titanium Phosphinimide Complexes in Ethylene Polymerization," <u>Organometallics</u> , Vol. 22, p. 1937-1947 (2003)				
Examiner				Date Considered			
<b>EXAMINER:</b> Initial if reference considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.							

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<b>U.S. PATENT DOCUMENTS</b>							
Examiner Initial		Document Number	Issue Date	Name	Class	Sub-Class	Filing Date
<b>FOREIGN PATENT DOCUMENTS</b>							
		Document Number	Date	Country	Class	Sub-Class	Translation
	BA	485,822 (counterpart US 5,243,001)	05/20/92	EP			
	BB	485,823 (counterpart US 5,145,819)	05/20/92	EP			
	BC	553,806	08/04/93	EP			
	BD	576,213	12/29/93	EP			
	BE	643,066	03/15/95	EP			
<b>OTHER (Including Author, Title, Date, Pertinent Pages, etc.)</b>							
	BF		J. Sassmannshausen et al., "Half-sandwich complexes of titanium and zirconium with pendant phenyl substituents. The influence of <i>ansa</i> -aryl coordination on the polymerisation activity of half-sandwich catalysts," <u>Journal of Organometallic Chemistry</u> , Vol. 592, p. 84-94 (1999)				
	BG		H. Seock Cho et al., "Polymerization of Ethylene and Ethylene/1-Hexene over Ziegler-Natta/Metallocene Hybrid Catalysts Supported on MgCl <sub>2</sub> Prepared by a Recrystallation Method," <u>Journal of Applied Science</u> , Vol. 70, p. 1707-1715 (1998)				
	BH		Y. Gwan Ko et al., "The Characteristics of Metallocene/Ziegler-Natta Hybrid Catalysts Supported on the Recrystallized MgCl <sub>2</sub> ," <u>Korean J. Chem. Eng.</u> , Vol. 16(5), p. 562-570 (1999)				
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Examiner Initial		Document Number	Issue Date	Name	Class	Sub-Class	Filing Date

FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Sub-Class	Translation
	CA	671,404	09/13/95	EP			
	CB	63 168408	11/15/94	JP			w/abstract
	CC	91/04257	04/04/91	WO			
	CD	96/22995	08/01/96	WO			
	CE	98/22486	05/28/98	WO			

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
	CF		H. Seock Cho et al, "Preparation of Inorganic MgC <sub>2</sub> -Alcohol Adduct and Its Application in Organometallic HYBRID Catalysts for Ethylene Polymerization" <u>Korean J. Chem. Eng.</u> , Vol. 19(4), p. 557-563 (2002)
	CG		G. Satyanarayana et al., "An Unusually Stable Supported Bis(cyclopentadienyl)titanium Dichloride-Trialkylaluminum Catalyst System for Ethylene Polymerization," <u>Macromolecules</u> , Vol. 26(17), p. 4712-4714 (1993)
	CH		H. Seock Cho et al., "Synthesis of inorganic MgCl <sub>2</sub> -alcohol adduct via recrystallization method and its application in supported organometallic catalysts for the polymerization of ethylene with 1-hexene" <u>Journal of Molecular Catalysis A: Chemical</u> 191 p. 155-165 (2003)

Examiner	Date Considered
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Examiner Initial		Document Number	Issue Date	Name	Class	Sub-Class	Filing Date

FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Sub-Class	Trans-lation
	DA	99/24446	05/20/99	WO			
	DB	99/58538	11/18/99	WO			
	DC	01/44318	06/21/01	WO			
	DD	01/47939	07/05/01	WO			
	DE	02/070569	09/12/02	WO			

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
	DF		K. Soga et al., "Copolymerization of olefins with SiO <sub>2</sub> -, Al <sub>2</sub> O <sub>3</sub> -, and MgCl <sub>2</sub> -supported metallocene catalysts activated by trialkylaluminiums," <u>Macromol. Chem. Phys.</u> , Vol. 195, p. 1369-1379 (1994)
	DG		K. Tanaka et al., "Rheological Analysis of Surface Relaxation Process of Monodisperse Polystyrene Films," <u>Macromolecules</u> , Vol. 33(20), p. 7588-7593 (2000)

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